

MAR 12 2007

Remarks

1. This Amendment is responsive to the Office Action dated December 12, 2006. Original claims 1-3 and new claims 4 and 5 are present for consideration.

2,3. Claims 1-3 are rejected as obvious over Woods et al (Woods) in view of Rueegge et al (Rueegge) and further view of Skidmore et al (Skidmore). Enclosed is the Declaration of Paul Margiott, who by education and experience is very well qualified to point out what the references actually disclose with respect to the claimed subject matter. "Rebuttal evidence and arguments can be provided...by way of an affidavit or declaration under 37 CFR 1.132....Office personnel should consider all rebuttal arguments and evidence presented by applicants." (MPEP 2144.08 II B).

Paragraph 4 of the Declaration establishes as prima facie fact that because the reactant gases are mixed as they leave the fuel cell stack, there can be no measurement made in Rueegge which indicates any characteristic of fuel exhaust flow, due to the mixture of oxidant with the fuel flow. Paragraph 5 of the Declaration establishes as prima facie fact that Rueegge teaches monitoring fuel inlet flow, in contrast with the claimed fuel exhaust flow. Paragraph 5 of the Declaration also establishes as prima facie fact that because the valve 8 in Fig. 6 of Rueegge leaks flow around the aperture 30, the pressure across the aperture 30 is not indicative of exhaust flow because the total aperture varies between the fixed aperture 30 and the variable aperture 8. Without a fixed aperture relationship, varied pressure across an aperture is not indicative of flow. Paragraph 6 of the Declaration establishes as prima facie fact that Rueegge does not teach one skilled in the art that flow, and particularly direction of flow, of fuel exhaust should be sensed.

Paragraph 7 establishes as prima facie fact that there is no suggestion in Skidmore that the absence of fuel flow should cause the fuel cell to be isolated, nor that disconnecting the fuel cell stack should be responsive to the direction of fuel exhaust flow. Paragraph 7 of the Declaration also establishes as prima facie fact that fuel flow and isolating the stack from the load in Skidmore are caused in common by the same event at the same time. Paragraph 8 of the Declaration establishes as prima facie fact that simultaneous acts of fuel shut off and disconnecting the load will occur prior to the absence of fuel exhaust flowing outwardly toward ambient. Paragraph 8 of the Declaration also establishes as prima facie fact that

Skidmore does not teach that the act of disconnecting a load is in response to there being no flow of fuel exhaust, or in the event that there is no flow of fuel exhaust towards ambient.

From the foregoing, it has clearly been established as prima facie fact that no combination of the references teach or suggest "sensing the direction of flow of gas between said flow fields and ambient" as required in lines 9 and 10 of both claims 1 and 2. "To establish a prima facie case of obviousness,....The prior art reference (or references when combined) must teach or suggest all the claim limitations." (MPEP 2143). Therefore, reconsideration and allowance of claims 1 and 2, and dependent claim 3, is hereby requested.

"To establish a prima facie case of obviousness, ...there must be some suggestion or motivation to modify the reference or to combine reference teachings." (MPEP 2143). Paragraph 9 of the Declaration establishes as prima facie fact that the teachings of Ruegge and Skidmore would not provide a suggestion or motivation to modify Woods in the manner of the claims. Paragraph 9 of the Declaration also establishes as prima facie fact that modification of Woods in any manner taught by Ruegge and Skidmore would not provide the inventions of claims 1 and 2 herein. Therefore, reconsideration and allowance of claims 1, 2, and dependent claim 3 is hereby respectfully requested.

4. Claims 1 and 2 are rejected as obvious over Woods in view of Kawasumi et al (Kawasumi) in further view of Skidmore. Paragraph 10 of the Declaration establishes as prima facie fact that Kawasumi teaches a single pressure sensor in the fuel effluent, and that a single pressure sensor will not indicate flow, and particularly not indicate flow direction. Paragraph 10 of the Declaration also establishes as prima facie fact that the pressure sensor (25) at the fuel exit of the stack is used for a purpose totally unrelated to establishing flow.

Paragraph 11 of the Declaration establishes as prima facie fact that Kawasumi does not teach or suggest that it is important to sense the flow of gases between the flow fields and ambient.

None of the three references disclose "sensing the direction of flow of gas between said flow fields and ambient" as required in lines 9 and 10 of both claims 1 and 2.

Paragraph 12 of the Declaration establishes as prima facie fact that the combination of Kawasumi and Skidmore would not provide motivation or suggestion to modify Woods in the manner of the claims, and that any modification of Woods with the teachings of Kawasumi and Skidmore would not provide the invention of claims 1 or 2 herein.

Therefore, reconsideration and allowance of claims 1 and 2 over these three references is respectfully requested.

Claims 4 and 5 are variations of claims 1 and 2, respectively and make it clear that disconnecting the electrical load is in response to no outward flow of fuel exhaust gas being sensed, and that direction of flow from the fields is the controlling event. All of the arguments hereinbefore with respect to claims 1 and 2 are, a fortiori, applicable to claims 4 and 5. Therefore, examination and allowance of claims 4 and 5 over the three references is respectfully requested.

To save the Examiner considerable time when this case is taken up, a short phone call is recommended should any issue herein still be unresolved. A few minutes on the phone could clarify a point, or result in a supplemental response which would further limit or dispose of issues. A five minute phone call can save the Examiner a lot of work. Such a phone call would be deeply appreciated.

Respectfully submitted,



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